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RESEARCH ARTICLE

Members' willingness to pay for sustainability agricultural organization: A Heckman model approach

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ABSTRACT

The purpose of this research analyzed the factors influencing the members' willingness to pay capital in the agricultural cooperatives and unions. The research was performed on a sample 155 members of agricultural organizations in Igdir province of Türkiye using the Simple Random Sampling method. Members' willingness to pay capital to their organizations were examined using the Contingent Valuation Method and effected factors were analyzed by Heckman Sample Selection model. The research showed that 56.6% of members were willing to pay capital an average of $131 for sustainability of organizations. According to the model results showed that members' gender, agricultural income, know definition of organization, increase in income of members, pay entry capital, frequency of visiting, meeting the general assembly, cohesion of members positively affected, however, age, household, animal units, negative experience in the past with their organizations negatively affected the members' willingness to pay capital. In order to sustainable of agricultural organizations, cohesion of members and participation to general assembly must increase. And, encouraging more young and female farmers to become a member, taking an active role cooperatives and unions in marketing and supply input could increase the members' willingness to pay capital. In addition, training programs should be organized by agricultural organizations and government about increasing capital and economic participation.

Keywords: Agricultural organizations; Contingent analysis; Cooperative; Heckman sample selection model; Willingness to pay capital

INTRODUCTION

A cooperative is described as a self-governing organization formed by individuals who voluntarily come together to address their shared social, economic and cultural requirements through a collectively owned and democratically managed initiative. Being a modern society in the world is associated with being organized. According to the 2019 data of the International Cooperatives Alliance (ICA), agricultural cooperatives is the most common type of cooperative in the world. There are 2.5 million cooperatives and more than one billion members in the world and approximately half of these cooperatives operate in agricultural sector. Agricultural sector is the second highest share sector with 32.7% among the top three hundred cooperatives in the world. As such, agricultural cooperatives have significant market share. For instance, Indian cooperatives command a 36% market share in the fertilizer market. Agricultural cooperatives in China dominate various sectors with a 60% market share in cotton, 68% in agri-processing, 70-80% in tea and over 80% in the fertilizer industry (ICA, 2022).

In European Union (EU) have 250 thousand cooperatives and 163 million members, which represents one third of EU population and employing 5.4 million people. There are more than 50 thousand agricultural cooperatives in the EU with more than 9.5 million members and more than 650 thousand employees. Agricultural cooperatives in the all EU Member State play a considerable role to attain a higher share in the food supply chain. They compose markets and give better market access and improve overall efficiency. The market share of agricultural cooperatives across EU countries averages at 40%. For example, market share of agricultural cooperatives stands at 83% in Netherlands, 79% in Finland, 55% in Italy, and 50% in France (EC, 2022). As a result of this, agricultural cooperatives in EU with considerable market shares in agri-food supply chains cover a large part of the agricultural sector. In addition, cooperatives are also important part

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of the United Kingdom (UK)'s landscape, with about 7 thousand independent co-operatives with some 15 million members and 33,829 employees across the country. There are 625 agricultural and farmer cooperatives in the UK with 157,235 farmers (approximately half of the UK's farmers) are members (UK, 2022).

In Türkiye, agricultural cooperatives and producer unions are the most important models in agricultural producer organizations. The history of the cooperatives in Türkiye extend to the nineteenth century. In Türkiye, there are estimated to be 11,867 agricultural cooperatives, with over 3.6 million members and 871 producer unions with 344,212 members as well as 278 breeding unions with 569,770 (GDoAR, 2022). Although the farmers' organizations in Türkiye shown significant improvement in terms of number, they were not effective in the market (Kilic Topuz et al., 2017). Unfortunately, these cooperatives and unions have a lower efficient about agricultural products when compared to the European Union and developed countries. That is because insufficient capital was identified as one of the primary challenges for the farmer organizations from delivering adequate and effective services (Kilic Topuz, 2020). In order to successful of cooperatives, members' willingness to supply capital is one of the prerequisites in agricultural cooperatives (Fulton, 1999; Zeuli and Betancor, 2005). Availability of capital may be limited when farmers lack the motivation to enhance their capital contribution (Alho, 2019) and potentially putting the cooperative's growth at risk if its members are unable or unwilling to provide the necessary investment capital (Staatz, 1989). One of the priority issues of agricultural policies in the Eleventh (2019-2023) Development Plan of Türkiye is the strengthening producer organizations and facilitating access of producer organizations to financial resources in order to create a highly competitive agricultural structure (OG, 2019). When the income sources of the agricultural farmers organizations in Türkiye are examined in the legislation, it is understood that the membership share and the entrance capital are the most considerable income factors (Kilic Topuz et al., 2017).

For the sustainability of the agriculture, farmers who live in rural areas must have a sufficient economic income. When farmers have not sufficient economic income, they tend to abandon the agriculture. Thus, it is inevitable for them to be organized in order to ensure sustainability in the agricultural sector, to meet solutions to the problems of the producers, and to improve their economic and social welfare.

Agricultural cooperatives and unions have an important role for sustainable development in agricultural areas. They provide a lot of benefits to farmers such as higher prices, lower costs, information via training, better quality product, cooperate with other stakeholders, easier access to the market, food security and reduced risks. In order to supply these benefits to members, agricultural organizations such as cooperatives or unions have to need capital. The best way to make this become that members provide capital to their cooperatives and unions. According to Barton et al. (2011), the most critical problem for cooperatives is the necessity to obtain and sustain sufficient capital. As access to capital is vital for any organizations, members' willingness to pay for sustainability agricultural organizations is a very important issue.

Literature review shows that there is a lot of study about willingness to pay for agricultural cooperatives. Many of these researches is about willingness of farmers to cooperate (Kovacic et al., 2000; Baranyai et al., 2008; Antonova et al., 2021; Drozdz et al., 2021). Research has begun to be investigate about members' willingness to pay capital for agricultural organizations in recent times (Newbery et al., 2013; Alho, 2016; Alho, 2019; Kilic Topuz, 2020; Fischer et al., 2021; Nzowa et al., 2023). Antonova et al. (2021) investigated the reasons for farmers' refusal to join cooperatives in Tatarstan, Russia using logit analysis and cross-tabulation method and logit analysis. Drozdz et al. (2021) sought to assess the extent of cooperation willingness among smallholder farmers in Lithuania and create profiles for them. Kovacic et al. (2000) also analysed that willingness of farmers in rural area to cooperate in Zagreb, Croation. Cook, (1995) and Staatz, (1987) emphasized that the inclination of farmers to cooperate can be attributed to an individual's readiness to join a collective or their willingness to work together with others to attain a shared objective or address a mutual challenge. Alho (2016) investigated whether farmers of agricultural cooperatives, were willingness to invest in the cooperative's expansion and found that the majority of members were willing to invest and willingness increased with farm size. Alho (2019) investigated that farmers' willingness to invest in new cooperative instruments using logit model, founded that most of the farmers regard the new investment instruments positively. Fischer et al. (2021) analysed that willingness to invest and volunteer in cooperatives among non-members. Newbery et al. (2013) analysed that members' satisfaction and willingness to pay for association survival in the United Kingdom using logit regression model. Kilic Topuz (2020) determined that members' willingness to invest capital in the agricultural producer unions in Samsun province of Türkiye using Random Effects Tobit model. Nedanov and Zutinic (2018) investigated that motivational factors for joining agricultural cooperatives in Croatia using a Correspondence analysis. Nzowa et al. (2023) analysed

co-operative members' willingness to pay for health insurance in Tanzania and findings indicated that most cooperative members were willing to pay and trust was required in order to increase willingness to pay among cooperative members. The main aim of this study is to determine members' the level of the willingness to pay capital for sustainability of agricultural organizations. Following this, the sub-objectives of this study to analyze the factors influencing the willingness to pay capital and to assess the factors affecting for sustainability agricultural cooperatives and unions in Igdir province of Türkiye.

MATERIALS AND METHODS

Study area

The research was performed in the Igdir province, Türkiye. Study area has located at northeastern of Türkiye and the border of Armenia, Nakhchivan and Iranian. The region is located between 39°53'37"north parallels and 43°59'52" east meridians (Fig. 1). Igdir province is approximately 3,664 km^2 in size with over 200 thousand population (TURKSTAT 2021).

Data collection

The research population composed of 473 farmers who were members of two Agricultural Development Cooperatives, one Beekeepers Union and one Sheep and Goat Breeders' Union in Igdir province. Sample farms were determined using Simple Random Sampling method (Cochran, 1963).

$$n = \frac{n_0}{1 + \frac{n_0 - 1}{N}} \qquad n_0 = \frac{Z^2 (p * q)}{d^2} \tag{1}$$

In the formula 1; n, sample size (155), N, total members (473), n_0, holds also if d, and q are all expressed as percentages instead of proportions, Z, the value of z in the table of standard normal distribution. Besides, 10% error margin and 90% confidence interval were used in the sampling. The sample size was calculated as 155. Primary data was collected from members with face to face surveys during the period from September to November of 2019. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's test value in this research was calculated as 0.900, which shows that the sample size is sufficient.

Data analysis

Contingent valuation method (CVM) and willingness to pay (WTP) method

The willingness to pay (WTP) for sustainability of agricultural organizations was used with Contingent Valuation Method (CVM). CVM has been broadly utilized to determine WTP studies because of numerous benefit (Mitchell and Carson 1989; Garrod and Willis 1990; Ayinde et al., 2019; Kilic Topuz, 2020). In this study, CVM was benefitted to assess how much members were willing to pay to for sustainability of agricultural organizations. The WTP function means the members' willingness to pay for sustainability of agricultural organizations:

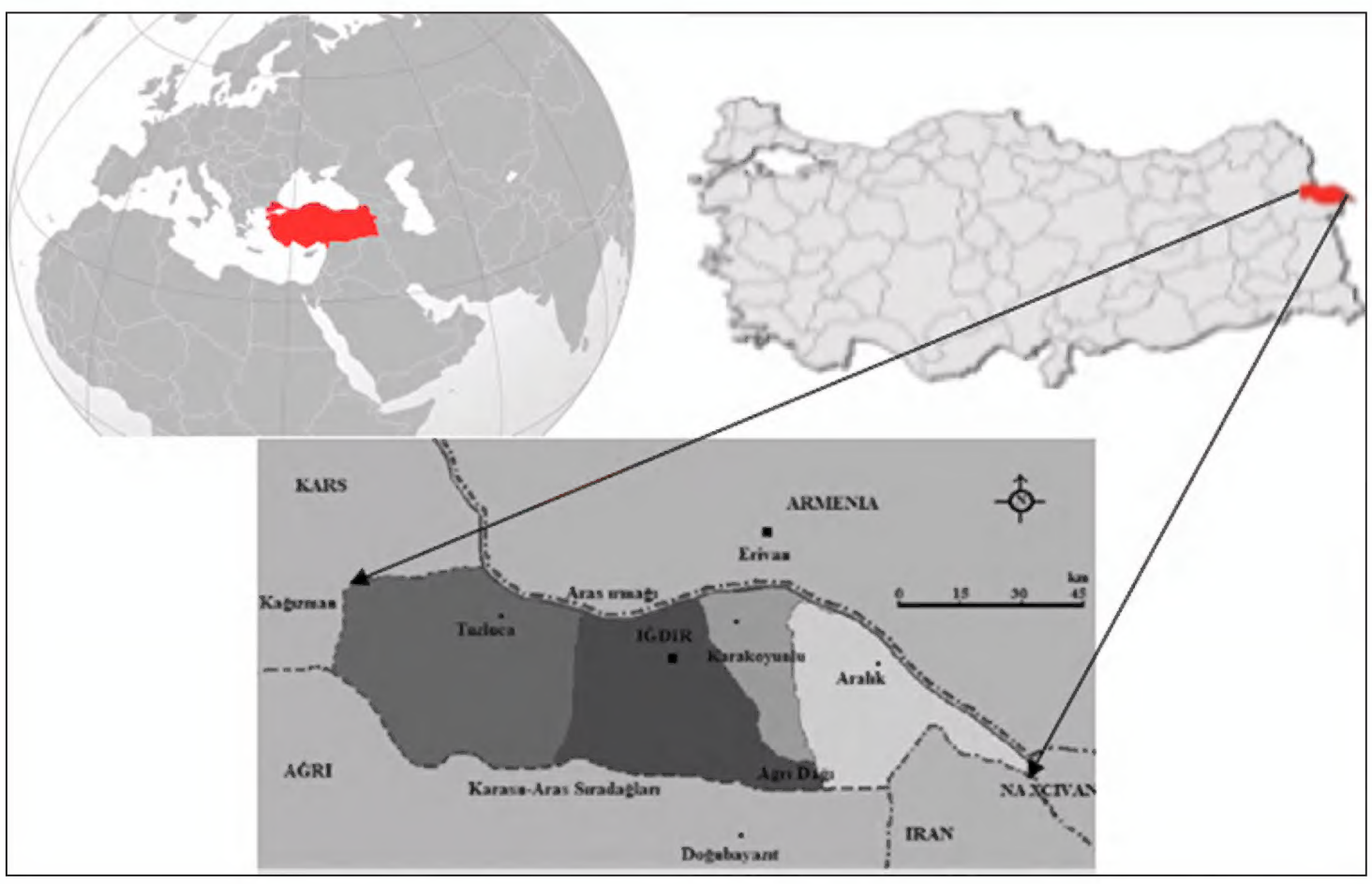

Fig 1. Study field.

$$E = WTP_i = \sum_{i=1}^{N} \beta_i P_{ri} \quad (2)$$

In the Formula 2, WTP_i refers i_{th} members' willingness to pay, E is the amount to increase net income of farm between $0 and $1750, how much capital would you willingness to pay for sustainability of agricultural organizations capital in each situation, $P_{ri} = \frac{n_i}{N}$ is the likelihood that member "I will pay that amount", with n_i being the number of members whose WTP is β_i and N is the sample size of farmers that WTP is positive (Hanemann, 1984).

Heckman sample selection model

The Heckman selection model stands out as one of the most widely used among the econometric models commonly employed for analyzing data with sample selection. Although relying on the normality assumption for error terms in this model, the distribution of the error term deviates considerably from normality in certain applications. Sample selection is common in applied research (Lachos et al., 2021).

Heckman sample selection model instead of y_i being observed when $y_i > \Phi$, y_i is supposed to be observed based on another latent variable called z_i

The equation of the latent variable is

$$z_i = w_i\alpha + u_i \quad (3)$$

$$y_i = x_i\beta_i + u_i, \qquad i = 1,2,\ldots,n. \quad (4)$$

where x and z are vectors of explanatory variables, β and α are parameter vectors, x_i and w_i can have similar variables, y_i only be observed when $z_i > 0$

$$Z'\alpha_i + u_i > 0, \quad y_i = x'\beta_i + v_i, \quad i = 1,\ldots,\ell$$
$$Z'\alpha_i + u_i \le 0, \quad i = \ell+1,\ldots,n \quad (5)$$

The error terms $[u, v]$ are supposed to be normally spread for estimation as follows;

$$\begin{bmatrix} u_i \\ v_i \end{bmatrix} \sim N\left(\begin{bmatrix} 0 \\ 0 \end{bmatrix}, \begin{bmatrix} 1 & \rho\sigma \\ \rho\sigma & \sigma^2 \end{bmatrix}\right) \quad (9)$$

Where σ is the standard deviation of v and ρ is the correlation between the error terms of equation.

Heckman is performed in two stages. The first stage is based on the probit model given in Equation (3). The second stage is based on linear regression model is estimated using a least squares approach (Heckman, 1979). In this research, the effects of independent variables on the decision and amount of payment that members were willingness to pay was analyzed by Heckman sample selection models. To estimate the Heckman Sample model of this study, the NLOGIT 5.0 package program was benefitted.

RESULTS AND DISCUSSION

Socio-economic characteristics of members

Variable definition and sample statistics of the Heckman Sample model were given in Table 1. The average age of the members, %98 of whom were males, were 49 years. Farmers whose education level is secondary school has been engaged in agriculture for more than 20 years. The average household size was 5.52 people, and their agricultural income of $9.3 thousand. The average land and animal units were 50 decares and 15.6 LU, respectively. Members have a low level of cohesion to cooperatives and unions and average number of visited in a year to their cooperatives and unions is 10 times. The average paid entry capital and dues to the agricultural organizations were $25 and $32, respectively. Forty-five percent of the members know definition of organization and 12.9% of the members have negative experiences in the past with their organizations. The ratio of the members bring about an increase in revenue of members thanks to organization (19.5%) was higher than the ratio caused a decrease in income of members through organization (11.6%). While only 9.1% of the members supply input from cooperatives and unions, the joining ratio of the members at training programs and general meeting were 29.7% and 17.6%, respectively. Drozdz et al. (2021) found that the average age of farmers who were willing to cooperate were 46 years and 45%, 40%, 10% and 5% of the farmers graduated from higher bachelor degree, vocational, higher master degree and general, respectively in Lithuania. Abdelhafidh et al. (2022) emphasized that because education and training improve farmers' human capacities which lead to the efficiency's increase have important positive marginal effects on the WTP. Antonova et al. (2021) emphasized that the main reasons for not cooperating were as farmers lack the experience of cooperation, lack of trust to each other and not socially active in their communities. Drozdz et al. (2021) discovered that only 8% of farmers intend to participate, the vast majority of farmers did not participate in cooperatives and reluctant to do so. Kovacic et al. (2000) also determined that as experience and education level increased, farmers

Table 1: Summary statistics of variables used in the model

Variables	Definition of variables	Mean	Std.Dev.
WTPIC	Members' willingness to invest capital ($)[1]	131	136.4
	Independent variables		
Explanatory variables (Continuous)		**Mean**	**Std.Dev.**
AGE	Age (years)	49.26	13.93
HOUSEHOLD	Household number (person)	5.52	2.26
EDUCATION	Education level (year)	7.54	4.66
EXPERIENCE	Agricultural experience (years)	22.77	14.39
AGINCOME	Agricultural income ($/year)	9.335	8.318
LAND	Agricultural land (decares)	50.73	322.1
LU	Animal units	15.63	25.10
MEMTIME	Membership duration (years)	7.09	4.62
ENTRYCAP	Venture capital ($)	25.38	26.43
DUES	Dues payment ($)	32.4	39.10
VISIT	Visited to organizations (times in a year)	10.32	42.17
COHESION	Total cohesion score of members	49.77	19.95
Explanatory variables (Categorical)		**n**	**%**
GENDER	Members who were female	22	1.30
	Members who were male	1.683	98.70
DEFINORG	Members who know definition of organization	759	45.50
	Members who did not know definition of organization	946	55.50
NEGEXP	No negative experience with coop.	1.496	87.7
	Negative experience with coop.	209	12.3
INCOMECHD	No resulted in a reduction income of members	1507	88.4
	Resulted in a reduction income of members	198	11.6
INCOMECHI	No resulted in an increase income of members	1375	80.5
	Resulted in an increase income of members	330	19.5
INPUT	Members who were not supply input from cooperative or union	1551	90.9
	Members who were supply input from cooperative or union	154	9.1
MEETTP	Never join at the training programs	1199	70.3
	Join at the training programs	506	29.7
MEETGM	Never join the general meeting	1408	82.5
	Join the general meeting	297	17.6

[1]5.7 Turkish Liras=$1 (average exchange rate of dollar on September 2019)

became more entrepreneurship and innovativeness. Nedanov and Zutinic (2018) found that production cost reduction and market sales and were the most important motivational factors for joining agricultural cooperatives.

Members' willingness to pay capital for sustainability agricultural organizations

The members' willingness to pay capital in their agricultural organizations was given in Fig. 2. While 56% of members would willingness to pay capital for sustainability agricultural organizations if the agricultural organizations caused an increase income of members, 44% of the members would not willingness to pay capital for sustainability agricultural organizations even if the agricultural organizations caused an increase in the income of members. Drozdz et al. (2021) found that 57% of small farms did not participate in cooperatives and did not intend to become members of cooperatives in the future in Lithuanian.

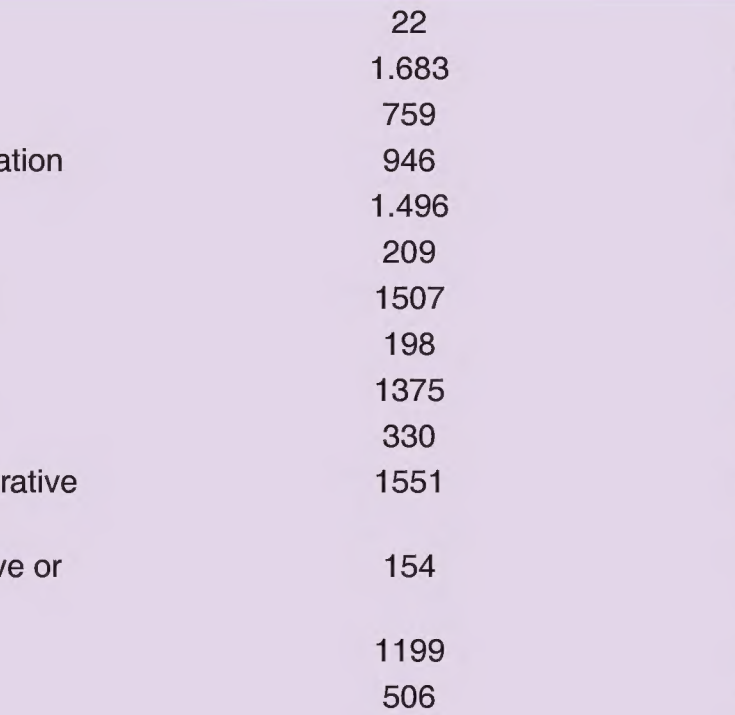

Fig 2. Members' willingness to pay capital for sustainability agricultural organizations.

Fig. 3 indicated that members' willingness to pay capital to organizations providing that the agricultural organizations increase income of members. From Fig. 3, it was understood that only 15.6% of absolute participants were willingness to pay capital of $41 to organizations even if the cooperatives and unions did not make any additional contribution to the farm's income. If the agricultural organizations make additional contribution $175, $350, $525 and $875 to the farmers' income, the members will willingness to pay capital of $30, $51, $73 and $122, respectively. If the income increment is $1750, the members will willingness to pay capital contribution to agricultural organizations of $242. The research results showed that 56.6% of the members were willing to pay of $131. The research findings show that as the increase in the income of the members of the cooperatives increases, the willingness of the members to contribute capital increases accordingly. But, if the agricultural organizations do not cause any increase in the income of the members, the majority of the members will not want to contribute capital to their organizations. Thus, we can conclude that cooperatives should carry out activities that will increase the income of their members in order to solve the financing problem. Newbery et al. (2013) found that 87% of the members were willing to pay capital for the survival of the rural association in United Kingdom, while 13% were unwilling to pay anything. Kilic Topuz (2020) found that if the agricultural unions make extra support to the farmer's income, 44.2% of the members were willing to invest an average capital of $162 in Samsun province of Türkiye. Therefore, these results showed that members' who lived in England willingness to pay for the survival of the rural cooperatives were the higher than Türkiye. In addition, it can be stated that although the willingness to pay capital of the members in the east is higher in terms of proportion compared to those in the west, it is lower in terms of amount in Türkiye. Kilic Topuz and Bozoglu (2016) determined that financial performance index of the agricultural unions as 42.5% and unions were the best in terms of taking membership fees.

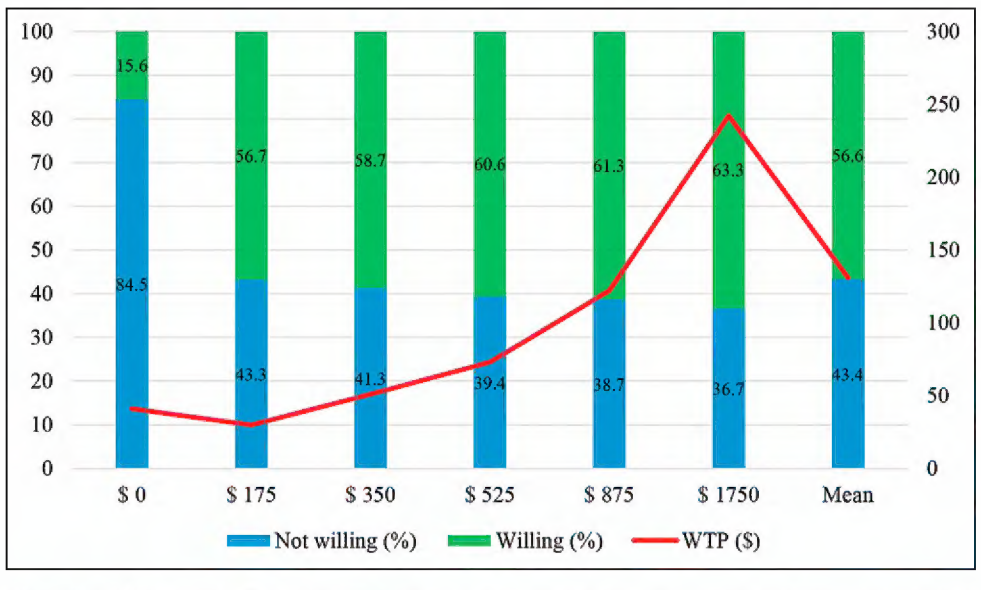

Fig 3. Members' willingness to pay capital to organizations if the agricultural organizations increase income of members.

Heckman Sample Selection model results

The Heckman's sample model results were presented in Table 2. The model results showed that gender, agricultural income, know definition of organization, increase in income of members through cooperatives or union, pay entry capital, visit frequency, meeting the general assembly, cohesion of members have statistically significant positive effects on the WTP. However, there was a statistically negative relationship between the variables of age, household, Animal units (LU), negative experience in the past with their organizations and the WTP. Kilic Topuz (2020) found that there was statistically positive relationship between attending the general assembly, fee payment, trust, and willingness to invest capital, but there was statistically negative relationship between the gender, visiting the union, household size, age, total income and willingness to invest capital. Newbery et al. (2013) underlined also that trust of members was the most important factor in order to increase willingness to pay for association survival. From this, it can be stated that

Table 2: Heckman sample selection model results

	Coefficient	Standart Error	p-Value
GENDER	43.446*	22.964	0.058
AGE	-0.653***	0.247	0.008
HOUSEHOLD	-3.473***	1.301	0.007
EDUCATION	-0.095	0.681	0.888
EXPERIENCE	-0.012	0.226	0.954
AGINCOME	0.00046***	0.7244D-01	0.000
LAND	0.005	0.008	0.529
LU	-0.621***	0.168	0.000
DEFINORG	16.129**	6.603	0.014
MEMTIME	0.877	0.634	0.166
NEGEXP	-27.238***	10.499	0.009
INCOMECHD	-11.362	10.063	0.258
INCOMECHI	23.101***	7.415	0.001
ENTRYCAP	0.037**	0.017	0.030
DUES	-0.016	0.012	0.199
INPUT	8.599	7.323	0.240
MEETTP	-0.736	0.651	0.258
VISIT	0.358***	0.064	0.000
MEETGM	5.851*	3.039	0.054
COHESION	1.047***	0.152	0.000
Lambda	16.196	31.543	0.607
N			1.705
Fit R-squared			0.238
Adjusted R-squared			0.229
Model test F[20, 1.705] (prob)			26.3 (0.000)
Standard error corrected for selection			100.823
Correlation of disturbance in regression and Selection Criterion (Rho)			0.160

*, ** and *** indicates statistically significant at the level of 10%, 5% and 1%, respectively

the research findings were similar to the related literature in terms of gender, trust, attending the general assembly and age, but the research finding were not to similar to the related literature in terms of visiting the cooperatives and income. Previous researches (Newbery et al. 2013; Kilic Topuz, 2020) indicate that trust among members is one of the most important factors affected willingness to pay capital. Nedanov and Zutinic (2018) emphasized that respondents with higher income through farming and cooperation were more motivated factors than to the other respondents with moderate income in Croatia. Drozdz et al. (2021) also found that farmers who express a willing to cooperate experience higher revenue from agricultural activities compared to their counterparts who are hesitant to cooperate. From this, it can be stated that the research findings are similar to the related literature. Some research (Newbery et al. 2013; Kilic Topuz and Bozoglu, 2016) determined that the larger associations with more members have better performance.

The Heckman's sample model results showed that the female members' (GENDER) willingness to pay capital was $43.4 higher than the male members. So, in order to provide sustainability of agricultural organizations, women farmers should be encouraged to become members. Another research (Kilic Topuz, 2020; Drozdz et al., 2021) confirms this recommendation. The members who bad experiences with organization (NEGEXP), WTP capital was $27.2 less than the other members who having not. Willingness to pay capital of members' who resulted an increase in revenue of members via cooperatives and unions (INCOMECHI) was $23.1 more than the no resulted an increase in revenue of members. Willingness to pay capital of members' who know definition of organization (DEFINORG) was $16.1 more than the members that did not know. Therefore, members should be trained about cooperation and organization for sustainability of agricultural association. Members who supply input through cooperatives and unions (INPUT) were willing to pay $8.5 more capital to their organization when compared to did not supply input through cooperatives and unions. To rise capital of agricultural organizations, they should take an active role in supply input. Kilic Topuz (2020) reported that to enhance members' trust, the producer organizations should actively participate in marketing and agricultural input supplies. Joined general assembly meeting, members (MEETGM) were willingness to pay capital $5.8 more than the others. According to the model results, as the cohesion index increases by one unit, the amount of capital contribution increases by $1.04 (COHESION). Namely, if cohesion index of members increases 10-unit, capital contribution will increase $10. This mean, as the members' cohesion increase, willingness to pay capital to their organization will be increase. For this reason, to rise the capital of agricultural organizations, cohesion of members should be increased. Member cohesion is very important for farmers' willingness to supply capital to agricultural cooperatives (Staatz, 1989; Anderson and Henehan, 2005). On the other hand, younger members were more willing to pay capital compared old members. As the age of members (AGE) increases, the willingness to pay capital decreases. So, younger farmers should be encouraged to become members for sustainability of agricultural organization. Drozdz et al. (2021) also found that younger farmers were more willingness to participate in cooperatives activities. Household of members (HOUSEHOLD) can increase capital contribution by $3.4 with a 1 person increase household. As the household of members increases, their WTP capital decreases. Members that paid entry capital (ENTRYCAP) were WTP capital was $0.03 higher than the others that no paid. More visiting cooperatives and union, members (VISIT) were more willing to pay capital than members visiting less cooperatives and union. If the frequency visiting of the members to cooperative were increased once a year, willingness to pay capital payment would increase as $0.35. Newbery et al. (2013) determined that as increase the number of association members and trust, WTP for association survival increase, but the variables of the number of sectors represented in the association, take of subsidies from the public sector, closed to new ideas, trust among local businesses had negatively affected. Kovacic et al. (2000) emphasized that more educated and more entrepreneurship farmers were more willingness to cooperate in Zagreb of Croation.

CONCLUSIONS

The study outlooks to evaluate the level of the WTP capital of members for sustainability of agricultural cooperatives and unions in Igdir province of Türkiye and to determine affected variables to WTP. Farmers' WTP for sustainability of agricultural organizations was surveyed utilizing CV techniques. Associated with such WTP, variables were defined enjoying the Heckman Sample Selection model. In this research, WTP for sustainable of agricultural organizations is around $131, which represents members of 56.6%. Findings determined that there was a positive relationship between variables such as members who female and younger, agricultural income, know definition of organization, increase in income of members through cooperatives or union, pay entry capital, visit frequency, meeting the general assembly, cohesion of members. However, members' willingness to pay capital is negatively affected by LU and negative experience in the past with their organizations. Resulted an increase in revenue of members via cooperatives or unions is the most positive and high effected variable to members' willingness to pay

capital. Thus, to boost the capital of the cooperatives and unions, they should take actively role in product marketing and input supply. Cohesion of members is very important factor to promote the farmers' willingness to supply capital to agricultural cooperatives. Another important factor to increase the capital of the cooperatives and unions, members should encourage to joining the general meeting. In addition, government and organizations should arrange training programs to increase consciousness of farmers about willingness to pay capital. Effective extension services should be arranged in this regard. According to the research findings, the female and ten years younger members' willingness to pay capital were higher than the others by $43.4 and $6.5, respectively. Because of their more willingness to pay capital for agricultural organizations, especially young and female farmers in the process of providing trainings should be given more importance.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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AUTHOR CONTRIBUTIONS

The author designed the research work, collected data, analysed, wrote and revised the manuscript.

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